

## ARIZONA CTE CAREER PREPARATION STANDARDS & MEASUREMENT CRITERIA

| FIRE SERVICE, 43.0200.00  |   |
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| STANDARD 1.0 – ANALYZE THE ROLE AND ORGANIZATION OF FIRE SERVICE                |   |
| 1.1   | Explain fire service history  |
| 1.2   | Explain fire service culture  |
| 1.3   | Describe the fire service mission and organization  |
| 1.4   | Identify career tracks within fire service  |
| 1.5   | Diagram a fire department organizational chart  |
| 1.6   | Describe fire department standard operating procedures and policies                       |
| 1.7   | Explain the fire agency's interactions with other agencies in the community               |
| STANDARD 2.0 – KNOW AND COMPLY WITH FIRE SERVICE SAFETY POLICIES AND PROCEDURES |   |
| 2.1   | Examine annual firefighter injuries and fatalities  |
| 2.2   | Identify safety standards related to fire service, such as NFPA 1500 and OSHA             |
| 2.3   | Know the fire department risk management model  |
| 2.4   | Explain appropriate safety precautions in fire stations and facilities                    |
| 2.5   | Practice personal safety in learning and training   |
| 2.6   | Describe basic principles of Crew Resource Management (CRM) and the Error-chain           |
| STANDARD 3.0 – EXAMINE RESPONSIBILITY FOR PERSONAL WELLNESS                     |   |
| 3.1   | Analyze sources of stress and stress management in fire service                           |
| 3.2   | Develop skills for dealing with crisis in fire service                                    |
| 3.3   | Describe fire service health and wellness programs and Employee Assistance Programs (EAP) |
| 3.4   | Apply nutrition principles to wellness  |
| 3.5   | Evaluate risk-taking behaviors in the fire service  |
| STANDARD 4.0 – EXHIBIT PHYSICAL FITNESS   |   |
| 4.1   | Develop a plan for personal fitness   |

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| 4.2  | Perform warm-up and flexibility exercises                                       |
| 4.3  | Perform cardiovascular exercises  |
| 4.4  | Perform functional training exercises related to firefighting                   |
| 4.5  | Perform basic core strengthening techniques                                     |
| 4.6  | Know the components that make up common physical fitness exams in fire service  |
| 4.7  | Perform a physical ability assessment or related assessment                     |
| <b>STANDARD 5.0 – EXPLAIN FIRE BEHAVIOR</b>  |   |
| 5.1  | Describe the fire triangle and fire tetrahedron                                 |
| 5.2  | Describe transmission of heat   |
| 5.3  | Explain various states of "fuel"  |
| 5.4  | Outline the classifications of fire—A,B,C,D,K                                   |
| 5.5  | Explain the phases of fire growth   |
| 5.6  | Describe factors that affect fire development                                   |
| 5.7  | Describe fire control theory  |
| <b>STANDARD 6.0 – DEMONSTRATE THE PROPER USE AND MAINTENANCE OF FIREFIGHTING PERSONAL PROTECTIVE EQUIPMENT (PPE)</b> |   |
| 6.1  | Identify various protective equipment that comprises the firefighter's ensemble |
| 6.2  | Demonstrate the care of personal protective equipment                           |
| 6.3  | Demonstrate donning and doffing of PPE within one minute                        |
| 6.4  | Identify the components of a self-contained breathing apparatus (SCBA)          |
| 6.5  | Describe respiratory hazards and when an SCBA shall be "used"                   |
| 6.6  | Practice donning and doffing SCBA   |
| 6.7  | Explain principles of Air Management consistent with NFPA 1404                  |
| 6.8  | Demonstrate replacement of SCBA air cylinders                                   |
| <b>STANDARD 7.0 – DEMONSTRATE THE USE OF PORTABLE FIRE EXTINGUISHERS</b>   |   |
| 7.1  | List the types of portable fire extinguishers                                   |

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| 7.2  | Recall fire classifications A,B,C,D,K   |
| 7.3  | Describe fire extinguisher rating systems   |
| 7.4  | Use a portable fire extinguisher safely, PASS method of application                         |
| 7.5  | Explain how to inspect a portable fire extinguisher   |
| <b>STANDARD 8.0 – ANALYZE FIRE DETECTION, ALARM, AND SUPPRESSION SYSTEMS</b> |   |
| 8.1  | Describe types of alarm systems   |
| 8.2  | Describe automatic sprinkler systems  |
| 8.3  | Explain sprinkler system fundamentals   |
| 8.4  | Discuss applications of sprinkler systems   |
| 8.5  | Research careers in fire detection, alarm, and suppression                                  |
| <b>STANDARD 9.0 – CONDUCT A CAREER SURVEY OF FIRE SERVICE</b>                |   |
| 9.1  | Examine trends in fire service occupations through the labor market research                |
| 9.2  | Identify several careers that support firefighters and public safety                        |
| 9.3  | Examine personal aptitudes and interests for a fire service/public safety career            |
| 9.4  | Examine the role of education in fire service career preparations                           |
| 9.5  | Research various employment opportunities in the fire service                               |
| <b>STANDARD 10.0 – EXPLAIN AND DESCRIBE PRINCIPLES OF WATER SUPPLY</b>       |   |
| 10.1   | Describe sources of water supply  |
| 10.2   | Explain different means of moving water   |
| 10.3   | Examine personal aptitudes and interests for a fire service/public safety career            |
| 10.4   | Identify different types of fire hydrants, markings, locations, inspection, and maintenance |
| 10.5   | Discuss alternative and rural water supplies  |
| <b>STANDARD 11.0 – DEMONSTRATE THE SELECTION, USE, AND CARE OF FIRE HOSE</b> |   |
| 11.1   | Identify various fire hose sizes and applications   |
| 11.2   | Describe fire hose damage and general care  |

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| 11.3   | Identify types of fire hose couplings (male, female) and care of couplings                   |
| 11.4   | Describe various hose appliances and hose tools  |
| 11.5   | Demonstrate a straight roll, donut roll, twin donut roll, and self-locking twin donut roll   |
| 11.6   | Recognize an accordion, horseshoe, and flat hose load  |
| 11.7   | Recognize a preconnected attack line flat load and a triple layer load                       |
| <b>STANDARD 12.0 – DESCRIBE AND DEMONSTRATE FIRE STREAMS</b>                         |  |
| 12.1   | Explain extinguishing properties of water, steam conversion, and friction loss               |
| 12.2   | Demonstrate advancing a hose line in various scenarios                                       |
| 12.3   | Demonstrate one and two firefighter operation of hose lines for small and large diameter     |
| 12.4   | Identify principles of fire streams  |
| 12.5   | Identify types, design, operation, nozzle pressure effects, and flow capabilities of nozzles |
| 12.6   | Demonstrate opening, closing, and adjusting nozzle flow and patterns                         |
| 12.7   | Describe indirect, combination, and direct fire attack with fire streams                     |
| <b>STANDARD 13.0 – CHARACTERIZE FIRE CONTROL METHODS FOR VARIOUS CLASSES OF FIRE</b> |  |
| 13.1   | Describe methods of suppressing structure fires  |
| 13.2   | Explain master stream devices and water flows through "big" lines                            |
| 13.3   | Describe suppressing Class B, Class C, and Class D fires                                     |
| 13.4   | Recall fire department risk management model   |
| 13.5   | Explain tactical priorities in order   |
| 13.6   | Describe engine, ladder, and rescue company functions on fires                               |
| <b>STANDARD 14.0 – ASSESS BUILDING CONSTRUCTION AND FIRE GROUND APPROACH</b>         |  |
| 14.1   | Define and know construction terminology   |
| 14.2   | Identify common building materials   |
| 14.3   | Describe principles of building construction and types of construction                       |
| 14.4   | Contrast strengths and weaknesses of different types of construction                         |

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| 14.5  | Identify dangerous building conditions that can lead to firefighter injury and fatality |
| 14.6  | Research a firefighter fatality (NIOSH) report where building construction was a factor |
| <b>STANDARD 15.0 – ANALYZE FIRE GROUND TACTICS AND STRATEGY</b>                               |   |
| 15.1  | Recall the risk management model  |
| 15.2  | Recall tactical priorities in order   |
| 15.3  | Explain the three fire ground strategies  |
| 15.4  | Discuss IRIC, RIC, and On-Deck and related OSHA requirements                            |
| 15.5  | Discuss rescue profiles   |
| 15.6  | Explain deployment of engines, ladders, and rescues on a fire ground                    |
| 15.7  | Complete NIMS IC-100, 200, and 700.A  |
| <b>STANDARD 16.0 – DEMONSTRATE FIRE GROUND SEARCH AND RESCUE (NONFIRE ENVIRONMENT)</b>        |   |
| 16.1  | Explain fire ground search safety guidelines  |
| 16.2  | Explain fire ground search safety guidelines  |
| 16.3  | Explain procedures for conducting a search in a multistory building                     |
| 16.4  | Demonstrate several methods of victim removal   |
| 16.5  | Discuss search and rescue marking systems   |
| 16.6  | Analyze rapid intervention crews and removal of downed firefighters                     |
| <b>STANDARD 17.0 – DESCRIBE FIRE DEPARTMENT COMMUNICATIONS</b>                                |   |
| 17.1  | Explain the role of the fire department dispatcher                                      |
| 17.2  | Research job responsibilities and career opportunities in public safety dispatch        |
| 17.3  | Know fire department orderm   |
| 17.4  | Demonstrate proper radio procedures in receiving and transmitting radio messages        |
| 17.5  | Demonstrate the ability to operate fire department communications equipment             |
| 17.6  | Demonstrate writing fire department reports   |
| <b>STANDARD 18.0 – DISCUSS VEHICLE EXTRICATION AND RESCUE EXTRICATION TOOLS AND EQUIPMENT</b> |   |

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| 18.1   | Describe emergency power and lighting equipment                              |
| 18.2   | Discuss hydraulic and nonhydraulic extrication tools                         |
| 18.3   | Discuss cribbing for extrication   |
| 18.4   | Describe various pneumatic tools   |
| 18.5   | Describe scene size-up, stabilizing a vehicle, and gaining access to victims |
| 18.6   | Explain disentanglement and patient management                               |
| <b>STANDARD 19.0 – DESCRIBE VENTILATION ON THE FIRE GROUND</b>     |  |
| 19.1   | Describe the reasons for fire ground ventilation                             |
| 19.2   | List considerations affecting the decisions to ventilate                     |
| 19.3   | Explain vertical ventilation   |
| 19.4   | Explain horizontal ventilation   |
| 19.5   | Explain forced ventilation   |
| 19.6   | Examine the effects of building systems on fires                             |
| <b>STANDARD 20.0 – DEMONSTRATE PROPER USE OF GROUND LADDERS</b>    |  |
| 20.1   | Define the basic parts of a ladder   |
| 20.2   | Demonstrate ladder inspection and maintenance                                |
| 20.3   | Demonstrate one and two firefighter ladder carries                           |
| 20.4   | Demonstrate ground ladder positioning  |
| 20.5   | Demonstrate procedures for raising and climbing ladders                      |
| 20.6   | Demonstrate one and two firefighter ladder raises                            |
| 20.7   | Demonstrate procedures for moving ground ladders                             |
| <b>STANDARD 21.0 – APPLY APPROPRIATE FORCIBLE ENTRY TECHNIQUES</b> |  |
| 21.1   | Identify various forcible entry tools  |
| 21.2   | Describe the use of various forcible entry tools                             |
| 21.3   | Describe door size up and construction features                              |

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| 21.4   | Explain locks and locking devices  |
| 21.5   | Describe (or demonstrate) conventional forcible entry through doors                              |
| 21.6   | Describe (or demonstrate) forcing windows  |
| 21.7   | Describe (or demonstrate) breaching walls  |
| <b>STANDARD 22.0 – DEMONSTRATE PRINCIPLES OF LOSS CONTROL (SALVAGE)</b>                        |  |
| 22.1   | Identify salvage covers and equipment  |
| 22.2   | Demonstrate care and maintenance of salvage covers   |
| 22.3   | Demonstrate folding, rolling, and spreading salvage covers with one and two firefighters         |
| 22.4   | Describe fire safety during overhaul   |
| 22.5   | Describe locating hidden fires and overhaul procedures   |
| <b>STANDARD 23.0 – DESCRIBE ROLES AND RESPONSIBILITIES OF PROTECTING THE FIRE SCENE</b>        |  |
| 23.1   | Describe observations to look for enroute and on scene of a fire                                 |
| 23.2   | Describe conduct during firefighting to protect the evidence                                     |
| 23.3   | Describe responsibilities after the fire in protecting evidence and securing the scene           |
| 23.4   | Research career pathways to become an arson investigator with fire or law enforcement            |
| 23.5   | Explain the use of canines in the use of arson investigation                                     |
| <b>STANDARD 24.0 – EXPLAIN FIRE PREVENTION AND PUBLIC EDUCATION IN FIRE SERVICE</b>            |  |
| 24.1   | Explain the role of a fire department public education specialist and public information officer |
| 24.2   | Explain the role of a fire inspector   |
| 24.3   | Research job responsibilities and career opportunities in public education and fire inspection   |
| 24.4   | Describe the importance of prevention in mitigating emergencies                                  |
| <b>STANDARD 25.0 – REVIEW BASIC PRINCIPLES OF HAZARDOUS MATERIALS OPERATIONS</b>               |  |
| 25.1   | Complete a Hazardous Materials First Responder course meeting requirements of NFPA 472           |
| <b>STANDARD 26.0 – DESCRIBE BASIC EMERGENCY MEDICAL CARE FOR FIREFIGHTERS/FIRST RESPONDERS</b> |  |
| 26.1   | Demonstrate proper use of body substance isolation (BSI) and use of PPE                          |

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| 26.2   | Describe scene safety at emergency medical incidents  |
| 26.3   | Describe common infectious diseases   |
| 26.4   | Describe various body systems—muscular, nervous, cardiovascular, respiratory, and digestive |
| 26.5   | Complete a basic Cardiopulmonary Resuscitation (CPR) course through AHA or equivalent       |
| 26.6   | Complete basic First Aid course through Red Cross or equivalent                             |
| <b>STANDARD 27.0 – DEMONSTRATE BASIC PRINCIPLES OF WILDLAND FIREFIGHTING</b>   |   |
| 27.1   | Complete Wildland S130/190 course or equivalent   |
| <b>STANDARD 28.0 – DEMONSTRATE SELECTION AND USE OF ROPES AND KNOTS</b>        |   |
| 28.1   | Describe types of ropes and their uses  |
| 28.2   | Describe types of rope construction   |
| 28.3   | Demonstrate rope care, cleaning, and maintenance  |
| 28.4   | Describe the elements of a knot   |
| 28.5   | Demonstrate tying overhand, bowline, hitches, and figure-eight family of knots              |
| 28.6   | Demonstrate hoisting tools and equipment  |
| <b>STANDARD 29.0 – DESCRIBE ELEMENTS AND SUPPORT OF TECHNICAL RESCUE TEAMS</b> |   |
| 29.1   | Explain the various disciplines that comprise technical rescue in fire service              |
| 29.2   | Research careers in search and rescue disciplines, including canine handling                |
| 29.3   | Evaluate film and video of technical rescues  |
| 29.4   | Explain the importance of air management in technical rescue                                |